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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/845,803
Filing Date: April 30, 2001
Appellant(s): ZEIRA ET AL.

Thomas A. Mattioli
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 22, 2008 appealing from the Office action mailed May 22, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,035,210	ENDO et al	3-2000
20020016177	MIYA et al	2-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 31-36 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miya et al (US 200200161) in view of Endo et al (US006035210A).

Regarding claims 31, 34 and 40 Miya discloses a means, method and apparatus for downlink power control for use in a spread spectrum time division communication system having time slots for communication (see Fig. 1, paras 0009 and 0020) comprising:

-at a user equipment, receiving a CCTrCH over a plurality of time slots and transmitting a single power command to a base station in response to a signal to interference ratio of the received CCTrCH (see Figs 2 and 5, paras 0009, 0058-0060, the mobile stations receives the signal via the control channel from the base station and transmits a TPC (power control) signal to the base station based on SIR measurements from the previous time slot. Figs. 2 & 5, disclose transmission and reception intervals of a mobile station in a communications system with plurality of time slots being either transmitted or received.);

-a transmission power level for each time slot of the plurality of time slots is set individually in response to the interference power measurement for that time slot and the single power command (see Figs 2 and 5, paras 0009, 0058-0060, the mobile station performs the SIR measurements for each time slot from a plurality of time slots individually and transmits a TPC signal (Di) back to the base station to increase or decrease downlink power transmission in the next time interval sequence).

Miya fails to disclose the user equipment sending interference power measurements to the base station.

Endo discloses the user equipment sending interference power measurements to the base station (see col 2 lines 17-22, col 10 lines 39-53).

Sending interference power measurements to the base station improves reception qualities for all users within a cell by minimizing the transmit power from the base station to the mobiles and therefore reducing overall network interference to each end user.

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Endo within Miya of sending interference power measurements to the base station so as to improve reception qualities for all users within a cell by minimizing the transmit power from the base station to the mobiles and therefore reducing overall network interference to each end user.

Regarding claims 32, and 35 Miya discloses the use of time slots/frames for transmission of power control (see para 0009, 0058-0060 and Fig 5). Miya discloses

the TDD frame format by time dividing the radio frequency and representing the timeslots with transmission timing "i" where i=0,1,…. representing the individual slots. The mobile station (MS) power control is based on the SIR measurements carried out by the MS for each timeslot "i".

Regarding claims 33, and 36 Miya discloses calculating interference power measurements for each timeslot based on the downlink reception data at the mobile station (see paras 0025, 0058-0060, Fig 5).

(10) Response to Argument

With respect to claims 31-36 and 40, Applicant contends "the present claims use a single power command for a CCTrCH which includes a plurality of time slots" and that "such an arrangement is not disclosed in Miya."

The Examiner respectfully disagrees, the applicant describes within its specifications (para 7) the correlation of TPC with CCTrCH, that is the TPC adjusts the transmit power level in **all** time slots (emphasis added to all), which is well known in the arts. Further Miya discloses power measurements per time slot (see Figs 2 & 5, paras 9, 58-60), the mobile station performs the SIR measurements for each time slot from a plurality of time slots individually and transmits a TPC signal (Di) back to the base station to increase or decrease downlink power transmission in the next time interval sequence to all mobiles accordingly.

Applicant further contends that “Endo is cited as disclosing the transmission of interference measurements. However, these interference measurements are not being used in any resemblance as to the manner recited in the claims.”

Examiner respectfully disagrees, Miya fails to disclose the user equipment sending **interference power measurements** (emphasis added) to the base station. Miya disclose determining the power level measurements on the downlink performed by the mobile or UE (Fig. 2), However not the “interference" or SIR levels which is a factor based on frame error rates.

Endo discloses the user equipment sending interference power measurements to the base station (see col 2 lines 17-22, col 10 lines 39-53), based on the frame error rate (col 11 lines 10-16) to reduce the interference.

Thus, Endo was cited for disclosing the transmission of interference measurements since the recited claims of applicant include interference measurements. Sending interference power measurements to the base station improves reception qualities for all users within a cell by minimizing the transmit power from the base station to the mobiles and therefore reducing overall network interference to each end user.

Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Endo within Miya of sending interference power measurements to the base station so as to improve reception qualities for all users within a cell by minimizing the transmit power from the base

station to the mobiles and therefore reducing overall network interference to each end user.

Applicant further contends that Miya fails to disclose, teach or suggest "… measuring downlink interference signal code power (ISCP) or the ISCP being used to generate a transport power command (TPC)."

Examiner respectfully disagrees, the ISCP per applicant's disclosure (para 38 of the specifications) is an interference measurement made by the user equipment (UE) for each time slot. Miya clearly discloses power level measurements on the downlink performed by the mobile or UE (Fig. 2). The mobile performs reception power level measurements (reception power Ri-1 from the last cycle) during Rx interval of timeslot i-1 (paras 14-16, 52), which is than transmitted to the base station interval Tx (Ti-1 of timeslot (i-1)) so as to adjust the next transmission power level (SIR; para 22) in the next cycle (timeslot i) and therefore reduce the interference and maintain appropriate SIR levels.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/RAJ JAIN/

Examiner, Art Unit 2416

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/William Trost/

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